MULTIMEDIA UNIVERSITY

STUDENT IDENTIFICATION NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 3, 2015/2016

BPB2034 – PROGRAMMING FOR BUSINESS APPLICATION

(All Sections / Groups)

30 MAY 2016
2:30 p.m – 4:30 p.m
(2 Hours)

INSTRUCTION TO STUDENT

1. This Question paper consists of 12 pages with 4 Questions only (with total marks of 100), excluding the cover page.
2. Answer **ALL** questions. Attempt ALL **FOUR** questions.
3. Please print all your answers in the Question paper itself.

QUESTION 1

Instructions

a. Write the **MOST CORRECT** answer for the following questions in the space provided.

(15 marks)

1. The Properties window A. allows you to modify control's properties without writing any code B. displays a control's information. C. has the same set of options for every control. D. A and B	

2. Which of the following is/are true about Visual Basic: A It's object oriented. B. It makes Windows programming easier. C. It's event driven. D. All of the above.	

3. Visual Basic programs are created using Microsoft's Visual Studio is a collection of software tools called a(n) _____. A operating system B. Integrated Programming Environment C. Integrated Development Environment D. Class Library.	

4. A comment in Visual Basic begins with: A. */ B. ' C. // D. \\	

5. _____ are violations of language rules. A. Logic errors B. Syntax errors C. Run-time errors D. None of the above.	

Continued...

6. When the user interacts with a GUI component, the interaction, known as a(n) _____, causes the program to perform a task by "calling" a method. A. driver B. Action C. event D. cause	

7. Which of the following is a valid declaration in Visual Basic? A. Int number B. Dim Integer number C. Dim number = Integer D. Dim number As Integer	

8. Which of the following is in highest-to-lowest order of operator precedence? A. multiplication, division, exponentiation B. addition, subtraction, division C. exponentiation, multiplication, addition D. None of the above.	

9. The _____ statement allows a program to make a decision based on the truth or falsity of some condition. A. IF … Then B. Test C. Whether D. None of the above	

10. What is NOT true about Keywords in Visual Basic? A. They have special meaning B. They appear in blue in Visual Studio C. They cannot be used as variable names D. They often begin with a lowercase letter	

Continued...

11. The compiler provides a default constructor with _____ parameter(s) in any class that does not explicitly declare a constructor.

A. 0
B. 1
C. 2
D. any number of

12. A(n) _____ is a special type of method that is used only when an object is created to initialize an object's data.

A. initializer
B. builder
C. constructor
D. definer

13. A variable of a reference type contains:

A. information about the type and its data
B. data of that type
C. the address of the location in memory where data is stored
D. None of the above.

14. The number in parentheses after an array name is the _____of the item in the array.

A. value
B. position
C. size
D. None of the above.

15. What is NOT true about functions?

A. Must have parameters
B. When calling a function, you must supply it with the same number of arguments as parameters defined in the function definition
C. Must return a value
D. Function names follow the same naming rules as variable name

Continued...

b. Indicate whether the following statements are **TRUE** or **FALSE**. Provide a reason for your answer. (15 marks)

An array must be declared and allocated in the same statement.	TRUE/FALSE
Arithmetic expressions in Visual Basic must be written in straight-line form.	TRUE/FALSE
The text in the Form's title bar is determined by the Form's Title property.	TRUE/FALSE
An *assignment statement* assigns a variable to a value.	TRUE/FALSE
Pseudocode helps you conceptualize a program during the design process.	TRUE/FALSE
Syntax errors are indicated only when you compile a program.	TRUE/FALSE
With sequential execution, statements execute one after the other in the order in which they appear in the program.	TRUE/FALSE
The If...Then selection statement performs an action if a condition is true or skips the action if the condition is false	TRUE/FALSE
a – = 3 can also be represented by the expression a = a – 3.	TRUE/FALSE
Visual Basic can determine the array bounds from the number of elements in the initializer list.	TRUE/FALSE
When a program is executed, array element indices are checked for validity—all indices must be greater than or equal to 0 and less than or equal to the length of the array.	TRUE/FALSE
Each class you create becomes a new type that can be used to declare variables and create objects.	TRUE/FALSE
Private class members are accessible only from outside the class in which they're declared.	TRUE/FALSE
Constructors are implemented as Sub methods because they cannot return values.	TRUE/FALSE
Each object of a class has its own copy of all the instance variables of the class.	TRUE/FALSE

Continued...

SUBTOTAL 30 MARKS

QUESTION 2

a. Describe what is meant by problem solving in programming?

(5 marks)

Answer:

b. What is the difference between an event procedure and Sub procedure?

(5 marks)

Answer:

c. Determine the output displayed when the button is clicked on for the following:

(10 marks)

Consider the array: s(0) = 7 s(1) = 0 s(2) = -12 s(3) = 9 s(4) = 10 s(5) = 3 s(6) = 6 The value of s(s(6) – s(5)) is:	

Continued...

Consider the code below:
 	
Dim a() As Integer = {99, 22, 11, 3, 11, 55, 44, 88, 2, -3}
 	
Dim result As Integer = 0
 	
For i As Integer = 0 To a.Length - 1
If a(i) > 30 Then
result += a(i)
End If
Next	

Consider the code below: Dim number() As Integer = {1, 2, 3, 4, 5, 6} For i = 0 to 3 step 2 number(i) = number(i+1) number(i+3) = i + number(i) next	
Consider the code below: Dim a(9) As Integer For i As Integer = 0 To a.Length - 1 a(i) = i + 2 Next Dim result As Integer = 0 For i As Integer = 0 To a.Length - 1 result += a(i) Next	

Continued...

Consider the code below:

```
Dim temp As Integer
  temp = 180

  While temp <> 80

   If temp > 90 Then
   resultLabel.Text = "This porridge is too hot! "

     ' cool down
     If temp > 150 Then
       temp = temp - 100
     Else
       temp = temp - 20
     End If

  ElseIf temp < 70 Then
  resultLabel.Text = "This porridge is too cold! "

       ' warm up
       If temp > 150 Then
          temp = temp + 30
       Else
          temp = temp + 20
       End If

    End If

  End While

If (temp = 80) Then
resultLabel.Text = "This porridge is just right! "
End If

End Sub
```

Continued...

SUBTOTAL 20 MARKS

QUESTION 3

a. Identify the following types of errors by rewriting the codes below with the correct codes. Please underline the corrected codes.

```
Private Sub btnDisplay_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles btnDisplay.Click
Dim a As Integer
A = CInt(InputBox("Enter 1 or 2"))
txtOutput.Text = CStr(Greeting(a))
End Sub

Function Greeting(ByVal x As Integer) As Integer
Return "hellohi ya".Substring(5 * (x-1), 5)
End Function
```

(5 marks)

Answer:

b. Rewrite the program with the output performed by a call to a Sub procedure.

```
Private Sub btnDisplay_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles btnDisplay.Click
Dim num As Integer = 7
Dim name As String = "Sam"
txtOutput.Text = num & " is a lucky number."
txtOutput.Text = "Hi." & name
End Sub
```

(15 marks)

Continued...

Answer:

c. Declare and initialize an *array* which holds the ***tests*** information as following: [50, 60, 70, 80, 65, 100] in the event procedure "*btnCalculate_Click*" as given below:

```
Private Sub btnCalculate_Click(…) Handles btnCalculate.Click
' declare and initialize array to hold the mark information
End Sub
```

(5 marks)

Answer:

SUBTOTAL 25 MARKS

Continued...

QUESTION 4

The Multimedia University's bookstore receives cartoons of textbooks. In each shipment, all cartons contain the same number of textbooks. The inventory manager wants use a computer to calculate the total number of textbooks arriving at the bookstore for each shipment. The inventory manager will enter the number of cartons received and the fixed number of textbooks in each carton for each shipment; then the application will calculate the total number of textbooks in the shipment.

a. Draw a flowchart to explain the logical steps for this scenario.

(6 marks)

b. Create the GUI for the above scenario.

(4 marks)

d. Explain the three types of Errors with examples:

i) Logical error

ii) Run – time error

iii) Syntax error

(15 marks)

Answer:

SUBTOTAL 25 MARKS

END OF EXAM QUESTION